CLAIMS

1.   Method for simulating an actual missile by means of an missile simulator during testing of an aircraft system which comprises a weapons system (1), where the missile is
5   controlled from the weapons system (1) by a trouble signal (6) in a control loop by means of the said trouble signal (6) positioning a target seeker in the missile and through the sending back of the target seeker's position to the weapons system via an actual value signal (8),
        characterized in that
        a) the target seeker in the missile is commanded by the weapons system (1) to adopt
10   a predetermined position,
        b) the missile simulator measures the control loop's trouble signal (6), generates an actual value for the position of the target seeker and sends the actual value (8) to the weapons system (1),
        c) the weapons system (1) calculates a new trouble signal (6) for the control loop,
15   d) steps b to c are repeated during the test.

2.   Method according to claim 1, characterized in that the trouble signal (6) is measured continuously in an interface (7) and that the sampled values for the error in amplitude (A) and error in phase angle (φ), which is given by the difference between the vector (S^c), which gives
20   the position for a command target, and the vector (S_0), which gives the target seeker's actual value, are determined and sent to a missile model (5) in the missile simulator.

3.   Method according to claim 2, characterized in that for each sample value of the trouble signal (6) the missile model (5) calculates a new actual value ($\overline{S}$) of the target
25   seeker's position and sends this actual value ($\overline{S}$) back to the interface (7) in the form of actual values for the position vector's amplitude (A) and the position vector's phase angle (φ).

4.   Method according to claim 3, characterized in that the interface (7) reproduces a continuous actual value signal (8) from the values for amplitude (A) and phase angle (φ)
30   obtained from the missile model (5).

5.   Method according to claim 4, characterized in that the interface (7) inverts the actual value signal (8).

6.   Method according to claim 5, characterized in that the trouble signal (6) is generated in a summing unit (2) in the weapons system (1) by summing of the signal from the weapons system (1), which gives the position for a commanded target, and the inverted actual value

5   signal (8) in a summing unit (2).

add C2

add C4 on separate sheet